Claims

1. Network device for a wireless network, **characterized by** means (5, 6, 9, 10) to adjust its transmit power on basis of a recommendation for the transmit power regulation received from another network device and to generate a recommendation for the transmit power regulation for another network device on basis of the transmission signal received from said other network device.

2. Network device according to claim 1, **characterized by** a transmit power control decoder (9) that receives a transmit power control signal and decodes therefrom a recommendation signal indicating the amount to change the transmit power.

3. Network device according to claim 1 or 2, **characterized by** a transmit power control encoder (10) that receives a transmit power deviation signal and encodes therefrom a transmit power control signal.

4. Network device according to anyone of claims 1 to 3, **characterized in that** it is a mobile terminal or a central controller.

5. Network device according to anyone of claims 1 to 4, **characterized in that** it is used in an IEEE 1394 based HIPERLAN type 2 network.

6. Method to perform a transmit power control in-between a first network device (1) and a second network device (15) of a wireless network, **characterized by** the following steps:

- transmitting a message from the first network device(1) to the second network device (15);
- measuring the received signal quality of the signal carrying said message within the second network device, comparing it to the wanted received signal quality within the second network device (15), and based on this generating and transmitting a recommendation from the second network device (15) to the first network device (1) how to adjust its transmit power; and
- adjusting the transmission power within the first network device (1) on basis of the received recommendation how to adjust its transmit power.

7. Method according to claim 6, **characterized by** the following additional

steps:

- measuring the received signal quality of the signal carrying said recommendation within the first network device, comparing it to the wanted received signal quality within the first network device (1), and based on this generating and transmitting a recommendation from the first network device (1) to the second network device (15) how to adjust its transmit power; and

- adjusting the transmission power within the second network device (15) on basis of the received recommendation how to adjust its transmit power.

Sub a2

8. Method according to claim 6 or 7, **characterized in that** the first transmitted message from the first network device (1) to the second network device (15) and/or the signal carrying the recommendation for the first network device how to adjust its transmit power has the maximum transmit power level of the first network device (1).

9. Method according to claim 6 or 7, **characterized in that** the first transmitted message from the first network device (1) to the second network device (15) and/or the signal carrying the recommendation for the first network device how to adjust its transmit power has a transmit power level determined on basis of a topology map of the network indicating the quality of connectivity of all network devices within the network.

10. Method according to claim 6 or 7, **characterized in that** the signal carrying the recommendation for the first network device how to adjust its transmit power has a transmit power level determined on basis of an information indicating the wanted received power level and the transmit power level of the first network device (1) which is transmitted with the first transmitted message from the first network device (1) to the second network device (15) and the received power level of said message at the second network device (15).

Sub a3

11. Method according to anyone of claims 6 to 10, **characterized in that** a recommendation for a network device how to adjust its transmit power is always given from a peer network device in case the received power level exceeds a maximum deviation.

12. Method according to anyone of claims 6 to 10, **characterized in that** it is performed within a network device according to anyone of claims 1 to 6.